Calorimetry and Thermo Quiz ver2

Marks will be deducted for incorrect units or sig figs. A correct answer gets all points and work shown with an incorrect answer will likely get part marks

1. I tried to measure the heat energy produced by my stove by putting a 1.5000kg cast iron pan (c=0.444J/g°C) on my stove. The frying pan heated up from 10°C to 229.0°C. How much energy did my stove produce? (/3)

2. Mr. Sheps decided to conduct a chemical reaction in his brand new bomb calorimeter. He dissolved an unknown solid in water and found that the temperature of the mixture went from 23°C to -5°C (/3)

1. Was the reaction exothermic or endothermic: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What type of a system is a calorimeter?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Describe this system in terms of energy and mass transfer:

3. Mrs. D heated a block of gold from 0°C to 100°C. She decided she wanted to try the experiment again but she wanted to **double** the change in temperature (200°C). What changes can she make to the: (/1)

1. heat energy:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) mass:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. A chemist took a 0.500kg block of aluminum (c=0.900J/g°C) and heated it up to 8.00x102K using 210.0 kilojoules of energy. What was the starting temperature (in Kelvin) of the block of aluminum? (/3)